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(11) EP 1 219 542 A1

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
03.07.2002 Bulletin 2002/27

(51) Int Cl.⁷: B65D 5/42

(21) Application number: 01129071.5

(22) Date of filing: 07.12.2001

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR
Designated Extension States:
AL LT LV MK RO SI

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(30) Priority: 28.12.2000 IT MI002847

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(54) Box with pocket for illustrative leaflet

(57) A box formed from a single piece of cardboard and having at least one internal flap (12) presenting a folding line (14) corresponding with one of the edges (9) of the box, this flap delimiting with those lateral panels

(3,4) of the box adjacent to it a pocket housing an illustrative leaflet (19) or the like which is inserted into the pocket before the article to be contained is inserted into the box.

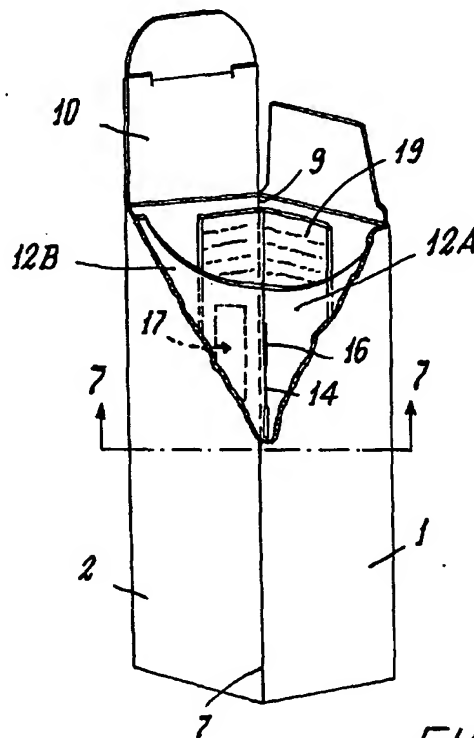


FIG. 6

Description

[0001] This invention relates to a box formed from a single piece of cardboard and having an internal pocket for housing an illustrative leaflet or the like.

[0002] Many articles are housed, preserved and transported in boxes or holders made of cardboard. Very often, illustrative leaflets or the like are also inserted into these boxes. The most frequent case is that in which the articles inserted into the boxes are containers of various kinds, bottles of various materials, blister packs or the like containing a pharmaceutical product: in this case, the leaflet illustrating the pharmaceutical product must necessarily be present in the actual box into which the bottle, container or the like is inserted.

[0003] In the known art, the boxes are produced by specialist firms, the pharmaceutical industry then directly inserting the bottles or the like into them together with the illustrative leaflets: this operation is relatively laborious and slow, especially as a result of the difficulties encountered in inserting the leaflet (often of large dimensions and folded over several times) into the box in such a manner that it still allows the bottle to be freely inserted without becoming creased.

[0004] The main object of the present invention is therefore to provide a box formed from a single piece of cardboard, which has in its interior a pocket into which the leaflet is inserted directly by the manufacturer of the box, the user of which has therefore merely to insert the article (bottle, etc.) which the box is intended to contain.

[0005] A further object is to provide a box of the aforesaid type in which the leaflet is retained securely adhering to the inner surfaces of the box, so enabling just the said article to be easily and quickly inserted into it by the box user.

[0006] A further object is to produce a box in which the illustrative leaflet can be inserted easily and quickly by the box manufacturer directly during the box formation stage.

[0007] These and further objects are attained by a box formed from a single piece of punched and crease-lined cardboard or the like, comprising:

- at least four consecutive main panels,
- a flap projecting from the first of said main panels, this flap being superposed and glued onto the last of the main panels of the finished box,
- at least two panels for closing the two ends of the box and projecting from the ends of at least one of the main panels, the main panels and said flap being separated one from the other by parallel longitudinal folding lines, the closure panels being separated from the main panels by transverse folding lines substantially perpendicular to said longitudinal folding lines, characterised in that from the last of said main panels there projects a supplementary panel separated from it by a folding line parallel to said longitudinal folding lines, the width of the supplementary panel being less than the total width of the two main panels consecutive to it, the said supplementary panel being divided into two parts by an intermediate folding line also parallel to said longitudinal folding lines, the supplementary panel being folded into the interior of the box about that folding line which separates it from said last main panel from which it projects and being also partially folded about said intermediate folding line in such a way that each one of the two parts of the supplementary panel faces a respective one of the main panels to form inside the box a pocket for housing said illustrative leaflet.

plementary panel being less than the total width of the two main panels consecutive to it, the said supplementary panel being divided into two parts by an intermediate folding line also parallel to said longitudinal folding lines, the supplementary panel being folded into the interior of the box about that folding line which separates it from said last main panel from which it projects and being also partially folded about said intermediate folding line in such a way that each one of the two parts of the supplementary panel faces a respective one of the main panels to form inside the box a pocket for housing said illustrative leaflet.

[0008] Preferably said intermediate folding line of the supplementary panel and also the folding line which separates it from said last main panel comprise cuts made in the cardboard and extending for a limited portion of the length of said folding lines.

[0009] Again preferably, a portion of one end of said supplementary panel is glued to the inner surface of the main panel, to which it is faced.

[0010] Finally, advantageously, in at least one of the two main panels facing said supplementary panel there is provided a window open in a position corresponding with said pocket to enable a portion of the illustrative leaflet inserted into the pocket of the box to be seen from the outside.

[0011] In addition to the finished box, the invention also covers the single piece of punched and crease-lined cardboard (or other flexible material) usable to form boxes having the aforesaid characteristics.

[0012] The structure and characteristics of the box will be more apparent from the ensuing description of one embodiment thereof given by way of non-limiting example with reference to the accompanying drawings, in which:

Figure 1 is a plan view of a spread-out punched and crease-lined piece of cardboard usable for forming a box, the figure showing that surface of the cardboard which is to remain on the inside of the box; Figures 2 to 5 show the piece of cardboard of Figure 1 in its successive folding steps to form the box;

Figure 6 is a perspective view of the finished box with its upper lid open, a portion of the box having been omitted to allow clearer vision of its interior;

Figure 7 is an enlarged cross-section through the box on the line 7-7 of Figure 6; and

Figure 8 is similar to Figure 7 but shows a different arrangement of the folded panels inside the box.

[0013] Reference will firstly be made to Figure 1, which shows a spread-out piece of punched and crease-lined cardboard seen from its inner side, i.e. the opposite side to that on which the writing to be visible from the outside of the finished box is printed.

[0014] The cardboard piece comprises four consecu-

tiv main pan ls 1-4 and a flap 5 projecting from th first of the main panels, i.e. from th pan l 1; the said panels and flap are separated one from another by parallel folding lines 6-9. From th two opposite ends of the main pan l 3 there project two closure panels 10 (separated from the main panels by transverse folding lines 11 perpendicular to the folding lines 6-9) intended to form the lid and respectively the base of the box. From opposing sides of the main panels 2 and 4 there also project foldable sidepieces which for simplicity have not been numbered.

[0015] The structure of the cardboard piece described up to this point is entirely traditional.

[0016] The characteristic of the cardboard piece illustrated in the drawings is that from the last of the main panels, i.e. the panel 4, there projects a supplementary panel 12A, 12B separated from said panel 4 by a folding line 13 parallel to the lines 6-9. The supplementary panel is divided into two parts (12A and 12B respectively) by an intermediate folding line 14 also parallel to the lines 6-9.

[0017] From the drawings (in particular from Figure 3) it can be seen that the total width of the supplementary panel 12A, 12B is less than the total width of those two main panels 3, 4 consecutive to it so that when the supplementary panel is folded onto the two panels 3, 4, the two folding lines 9 and 14 do not lie superposed one on the other, while the longitudinal free edge of that part 12B of the supplementary panel lies parallel to but slightly spaced from the folding line 8 (as can be seen in particular from Figure 3).

[0018] Preferably, along the folding lines 13 and 14 of the supplementary panel there are provided short longitudinal cuts 15, 16 respectively, which facilitate the folding of the supplementary panel about said lines 13, 14.

[0019] Also preferably, the length of the supplementary panel 12A, 12B is less than the length of the main panels 1-4, to which they are faced in the folded box, and the upper edge of the supplementary panel is profiled, i.e. defined by a line which is arched (see the figures) or in any event not perpendicular to the lines 6-9, in order to facilitate insertion of a bottle (or other article) into the completed box.

[0020] Finally, from the drawings it can be seen that in the main panel 3 there is provided a window 17 (which could also extend into the panel 4 and which could be obtained by stripping away a knurled panel portion), a window 18 also being provided in the supplementary panel: the presence of these windows can be useful but is not strictly necessary.

[0021] It will now be assumed that the cardboard processing firm which has produced the punched and crease-lined cardboard sheet of Figure 1 then folds it in order to form from it the box to be despatched to the box user.

[0022] In a first step, an illustrative leaflet 19 already printed and folded on itself is automatically rested on the

main pan ls 3, 4, and a spot of glue is applied to the panel 4 (Figure 2). The supplementary panel 12A, 12B is then folded back onto the two panels 3, 4 such that the illustrative leaflet 19 is interposed between the two main pan ls and the supplementary panel (Figure 3), which form between themselves a pocket open at its upper end. The cardboard sheet is then further folded about the folding line 8, so that the supplementary panel rests on the inner surface of the panels 1, 2, and two strips of glue 21 are applied to the outer surface of the main panel 4 (Figure 4). It should be noted that the strips of glue applied to the panel 4 could instead be only one in number, or indeed the glue could cover the entire outer surface of the panel.

[0023] Finally the cardboard sheet is folded about the folding line 6, to superpose the flap 5 onto the main panel 4 and fix it thereto by the said glue (Figure 5).

[0024] All the aforescribed operations can be effected rapidly and easily by those cardboard processing firms who produce traditional boxes, employing those automatic machines commonly used by said firms.

[0025] The purpose of the window 17 is to leave uncovered, and visible from the outside of the box, a portion of the illustrative leaflet 19 on which a bar code identifying the leaflet can be printed. The window 18 enables the presence of the illustrative leaflet 19 to be verified, even if the finished box is open only at its lower end.

[0026] The user firm which receives the box already glued and folded as shown in Figure 5 then uses its normally used automatic machines to shape the box and close the base panel while leaving the upper panel or lid open, after which it inserts into the box the article which it is intended to house. For example, if the user firm produces pharmaceutical specialities, the article which it inserts into the box can be a bottle (not shown in the drawings).

[0027] As the operation of inserting the bottle into the box can be carried out at high speed by known machines, the user firm has the great advantage of not having to also insert the illustrative leaflet into the box (as is currently the case), and not having to be extremely careful to prevent the bottle (during its insertion into the box) from interfering with the leaflet, to deform or crush it.

[0028] On using the box of the invention, when it is squeezed to transfer it from the condition of Figure 5 to that of Figure 6, the supplementary panel automatically folds outwards about its intermediate folding line 14 (as the longitudinal free edge of the supplementary panel interferes with the adjacent inner surface of the panel 2), to form the pocket retaining the illustrative leaflet 19, which can then be easily extracted from the box by gripping it at the top where it is left free by the edge of the supplementary panel, as can be clearly seen in Figure 3 and especially in Figure 6.

[0029] The curved or inclined upper edge of the supplementary panel also facilitates insertion of the said bottle into the box, by preventing the bottle from jam-

ming against this fr edge of th supplementary panel.

[0030] The box represented in Figure 7 has a substantially square cross section, but it is obvious that the box may have a rectangular section, in which case some panels are larger than others.

[0031] Figure 8 is very similar to Figure 7 (and, for the sake of simplicity, the same reference numbers have been used therein) from which it differs essentially and simply because the supplementary panel has been folded inwards in such a way that the portions 12A and 12B of the supplementary panel face the panels 1 and respectively 2 of the box: in this case the portion 12B of the supplementary panel may preferably be glued on the internal surface of the panel 2 and the leaflet 19 may be retained between the panel and the portion 12A of the supplementary panel.

Claims

1. A box formed from a single piece of punched and crease-lined cardboard or the like, comprising:

- at least four consecutive main panels (1-4),
- a flap (5) projecting from the first (1) of said main panels, this flap being superposed and glued onto the last (4) of the main panels of the finished box,
- at least two panels (10) for closing the two ends of the box and projecting from the ends of at least one of the main panels (1-4),

the main panels (1-4) and said flap (5) being separated one from the other by parallel longitudinal folding lines (6-9), the closure panels (10) being separated from the main panels by transverse folding lines (11) substantially perpendicular to said longitudinal folding lines (6-9), **characterised in that** from the last (4) of said main panels there projects a supplementary panel (12A, 12B) separated from this latter (4) by a folding line (13) parallel to said longitudinal folding lines (6-9), the width of the supplementary panel (12A, 12B) being less than the total width of the two main panels (3, 4) consecutive to it, the said supplementary panel being divided into two parts (12A; 12B) by an intermediate folding line (14) also parallel to said longitudinal folding lines (6-9), the supplementary panel (12A, 12B) being folded into the interior of the box about that folding line (13) which separates it from said last main panel (4) from which it projects and being also partially folded about said intermediate folding line (14) in such a way that each one of the two parts (12A and respectively 12B) of the supplementary panel faces a respective one of the main panels (1-4) to form inside the box a pocket for housing said illustrative leaflet (19).

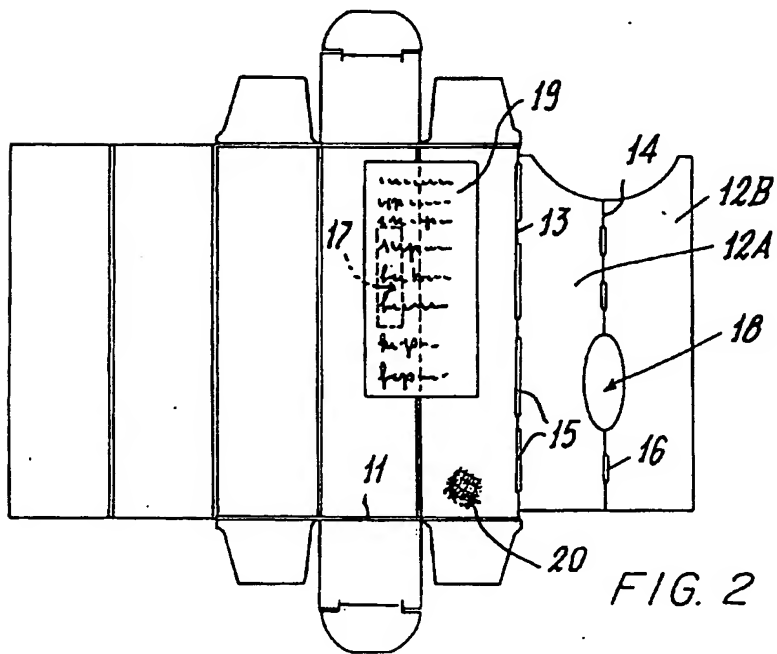
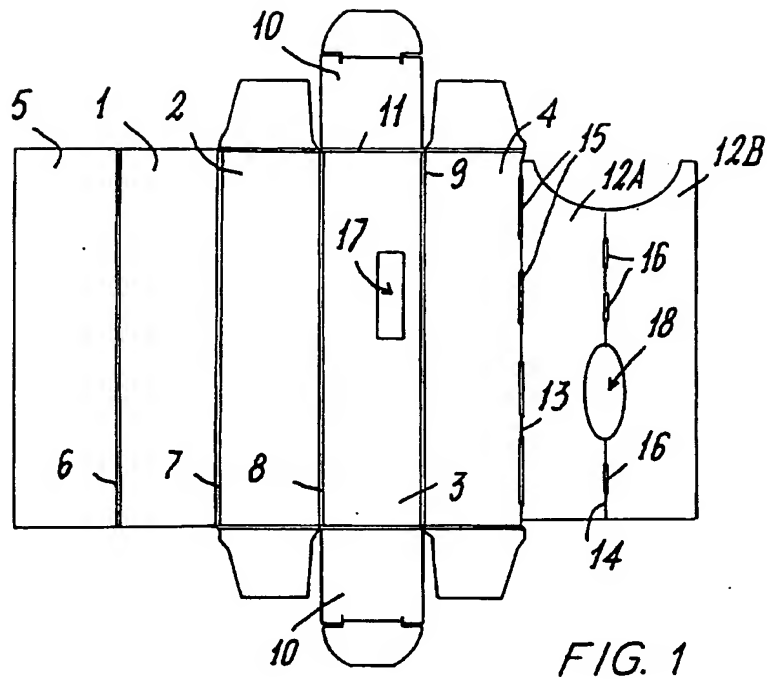
2. A box as claimed in claim 1, **characterised in that** a portion of one end of said supplementary panel (12A, 12B) -is glued to the inner surface of the main panel to which it is faced.

3. A box as claimed in claims 1 to 2, **characterised in that** the length of each one of said parts (12A, 12B) of the supplementary panel is less than that of the main panels (1-4) to which they are faced.

4. A box as claimed in claims 1 to 3, **characterised in that** in at least one (3) of the two main panels (3, 4) facing said supplementary panel (12A, 12B) there is provided a window (17) open in a position corresponding with said pocket.

5. A box as claimed in claims 1 to 4, **characterised in that** said intermediate folding line (14) of the supplementary panel (12A, 12B) and also the folding line (13) which separates it from said last main panel (4), comprise cuts (15, 16) made in the cardboard and extending for a limited portion of the length of said folding lines.

6. A sheet in the form of a single piece of punched and crease-lined cardboard or the like for forming a box having the characteristics resulting from one or more of the preceding claims.



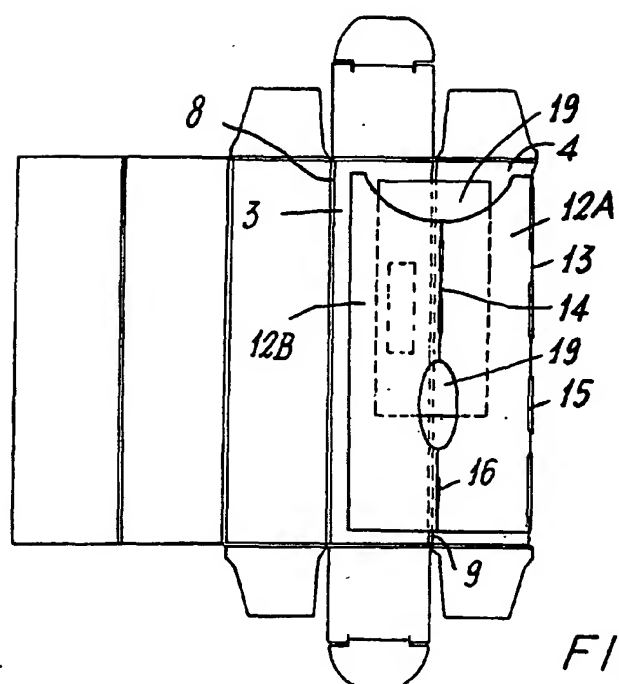


FIG. 3

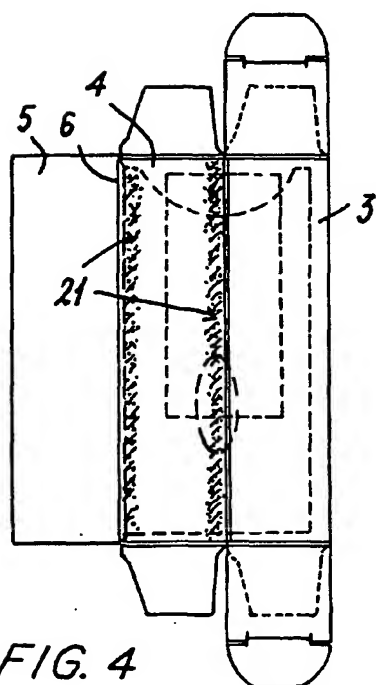


FIG. 4

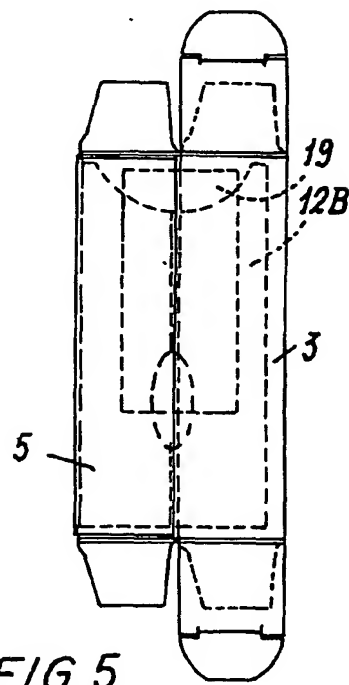


FIG. 5

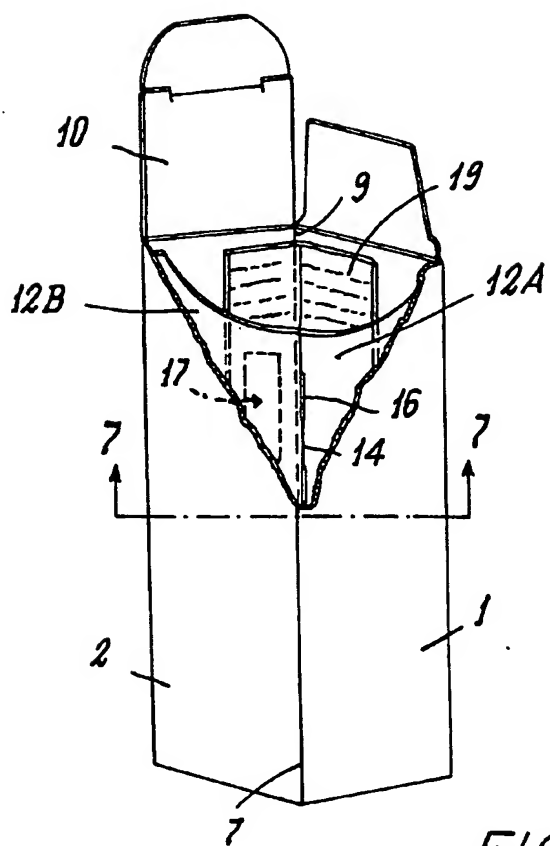


FIG. 6

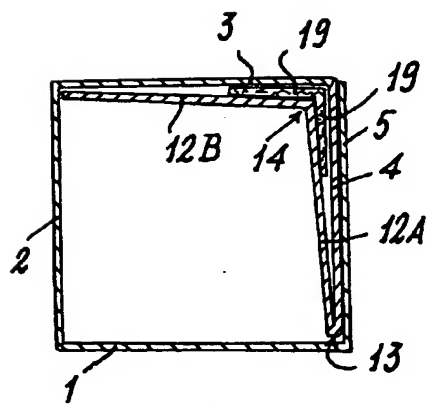


FIG. 7

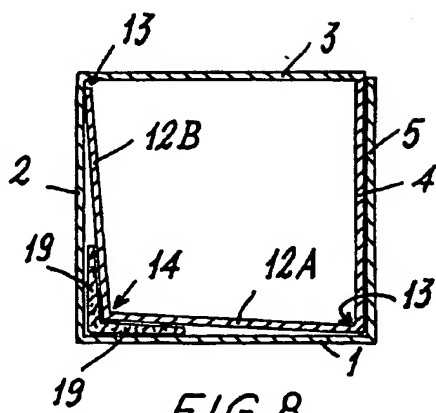


FIG. 8



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EUROPEAN SEARCH REPORT

Application Number
EP 01 12 9071

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	EP 0 911 266 A (ZANNINI GRAFICA) 28 April 1999 (1999-04-28) * abstract; claims; figures *	1-6	B65D5/42
A	DE 86 18 368 U (CARTONDRUCK) 21 August 1986 (1986-08-21) * claim 1; figures *	1-6	
A	DE 299 01 874 U (LANDERER GMBH & CO KG A) 29 April 1999 (1999-04-29) * claims; figures *	1-6	
A	WO 00 20289 A (OEHLUND JOHAN ;ASTRA AB (SE)) 13 April 2000 (2000-04-13) * claim A; figures 1-3 *	1-6	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B65D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 4 April 2002	Examiner SERRANO GALARRAGA, J
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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 12 9071

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Patent document cited in search report		Publication date	Patent family member(s)		Publication date
EP 0911266	A	28-04-1999	IT	F1970104 U1	01-02-1999
			IT	F1970271 A3	14-06-1999
			EP	0911266 A2	28-04-1999
DE 8618368	U	21-08-1986	DE	8618368 U1	21-08-1986
DE 29901874	U	29-04-1999	DE	29901874 U1	29-04-1999
WO 0020289	A	13-04-2000	AU	1195600 A	26-04-2000
			WO	0020289 A2	13-04-2000

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